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New Boxwood Planting at the Arboretum

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THE ASSOCIATES, through whose interest and generosity *The Bulletin* and certain other undertakings of the Arboretum are made possible, is an informal group of individuals interested in encouraging and furthering the educational and research endeavors of the Morris Arboretum. Further information concerning this organization will be sent on request.

ARBORETUM ACTIVITIES

Summer Course

During the six weeks of the University's Summer School, June 27 to August 6, a course in Hardy Ornamental Trees and Shrubs was conducted at the Arboretum. Instruction was given by the Director, assisted by Dr. Hui-Lin Li and other members of the staff. This was the first college-level course ever offered on a full-time basis by the Arboretum and marks the beginning of the expanded educational program mentioned in the last number of the Bulletin.

Fourteen students enrolled for the course this summer. Five of them were members of the University's School of Fine Arts who took the course in order to gain a better knowledge of plant materials and their role in landscape architecture. Four were teachers of biology in secondary schools in the Philadelphia area. The rest were undergraduate or graduate students, mostly majoring in biology or botany, from nearby colleges or universities.

Work tables were set up on the broad verandah of Gates Hall overlooking one of the most beautiful sections of the grounds. Here, on even the hottest day—and this summer was replete with such—a cool and refreshing breeze moved up the slope toward the "classroom."

The first week and a half of the session was devoted to a study of the Gymnosperms—pines, larches, firs, spruces, cedars, hemlocks, junipers, cypresses, yews, etc.—and the members of the class learned not only how to distinguish these groups but also how to recognize the various important species of each genus. After working with twigs and leaves in the laboratory, and acquiring practice in "keying them out," the group then moved out onto the grounds and learned a great deal about the living specimens. In this way it was possible for them to see the size and shape of the mature plant and to study the conditions under which a particular species achieves its

(Continued on page 35)

CERCIDIPHYLLUM

Hui-Lin Li

Cercidiphyllum or Katsura-tree is one of the most impressive trees of the temperate regions, attaining, as it grows in age, an immense size which surpasses most other broad-leaved trees. Of graceful habit and handsome foliage, it is highly ornamental in appearance. Botanically it is considered important and interesting because, with its certain distinctive and primitive features, it represents an isolated type of ancient lineage, a remnant of certain stocks flourishing in earlier times.

Cercidiphyllum is the only genus of the family Cercidiphyllaceae, one of several such small relict families of the alliance of the Magnoliales now surviving in eastern Asia. The Magnoliales are an assemblage of woody plant families considered by most botanists as representing the most primitive types of flowering plants now in existence.

Cercidiphyllum is a deciduous tree with opposite or sometimes subopposite or nearly alternate heart-shaped leaves resembling those of Cercis, the Judas-tree, hence the name Cercidiphyllum, meaning "Cercis-leaf." (Fig. 13.) The leaves, however, are finely and shallowly toothed instead of

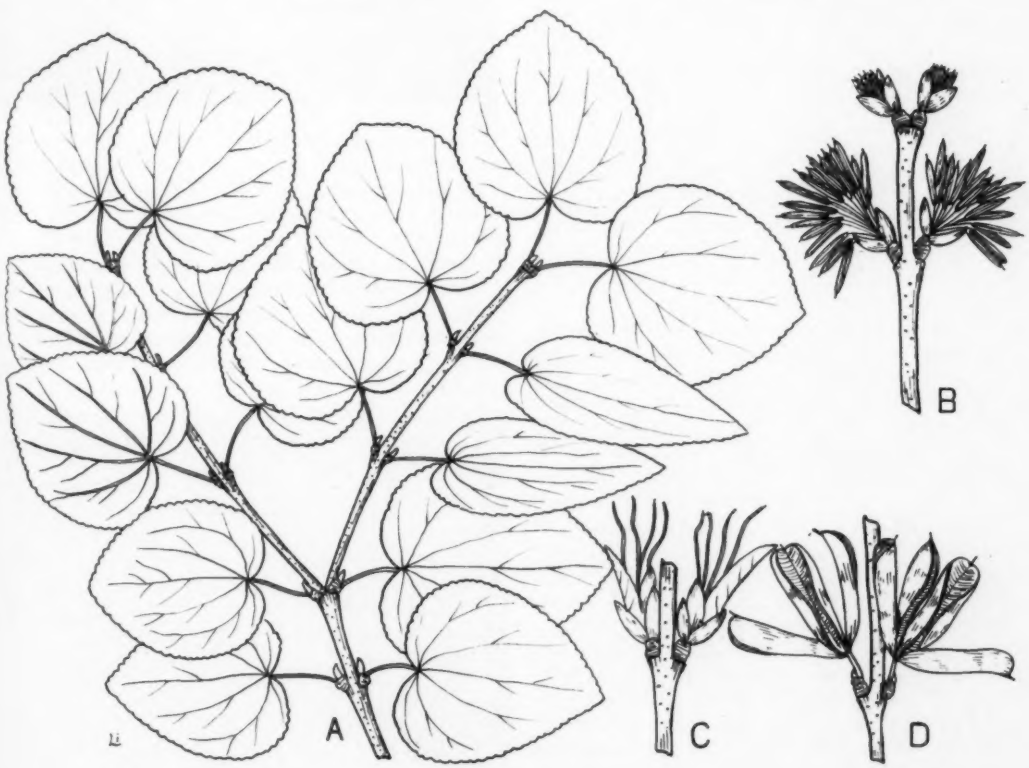

Fig. 13. *C. japonicum*. A. leafy branch, ½ natural size. B. branch with staminate flowers, natural size. C. branch with pistillate flowers, natural size. D. branch with fruits, natural size.

entire. The bark is characteristically spirally twisted and furrowed. The shoots also develop short spur-branches which bear the flowers and a single leaf, a very unique feature. These lateral spurs are formed by annual accretions added slowly over a period of years. Also distinct is the structure of the flowers. The trees are dioecious, that is, the flowers are unisexual with the staminate and pistillate appearing on different trees. The inconspicuous flowers have a few small bracts but are without a perianth. The staminate flowers have numerous stamens with slender filaments and linear red anthers. The pistillate ones consist of 3-6 carpels with long purple styles. These flowers are of interesting structures and botanists are not in full agreement as to whether they should be considered individual flowers or inflorescences. The carpels develop into dehiscent small pods containing many small winged seeds.

The genus occurs in Japan and China. (Fig. 14.) In Japan, the Katsura-tree, *C. japonicum* Sieb. & Zucc., occurs widely from central Hokkaido in the north through Honshu to Shikoku and Kiusiu in the south, covering nearly the entire length of the country. Katsura means a wig. The application of this name to the tree is not clear. In the north in Hokkaido, it grows at sea level and is very common. On the main island Honshu it is confined to high elevations mostly above 5,000 feet and is rather rare. It is a tree of the forests, preferring rich soil and moist situations.

Fig. 15. *C. japonicum*, var. *sinense*.

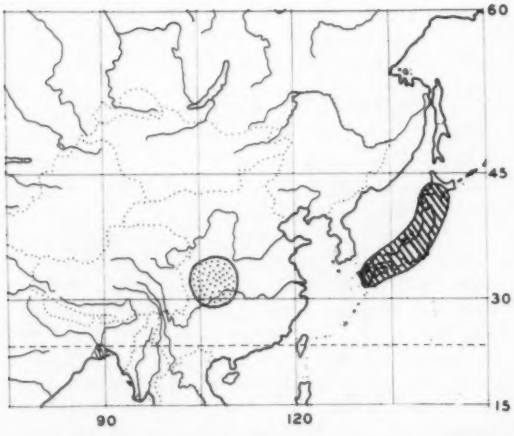

Fig. 14. Map showing range of *Cercidiphyllum*. Shaded area, *C. japonicum;* dotted area *C. japonicum*, var. *sinense*.

Some Japanese botanists also recognize two additional species, *C. ovale* Maxim., with narrower ovate leaves and *C. magnificum* Nakai, with larger leaves. Both are of local occurrence in Honshu only. Others, however, do not consider these as distinct species but merely as synonyms of *C. japonicum*. Some recognize the latter as a variety, *C. japonicum,* var. *magnificum* Nakai. The leaves of *C. japonicum* are said to measure 1¼-2¾ in. across, while in the variety *magnificum,* they attain to a diameter of about 2¾-4 in. However, leaves of oval as well as cordate shapes and leaves ranging from 1¼ to 4 in. in diameter are often found on the same tree in both herbarium and cultivated living specimens. These variations alone are apparently not worthy of specific recognition.

The Chinese Cercidiphyllum occurs in western China, over a thousand miles west of Japan, in eastern and western Szechuan, western Hupeh, and southern Shensi, at an altitude of 5,000 to 8,400 feet. It, like the Japanese plant, prefers moist situations and rich soil, but grows in more open areas, occurring most frequently on the banks of streams.

The Chinese Cercidiphyllum is considered a variety of the Japanese Katsura-tree, as *C. japonicum,* var. *sinense* Rehder & Wilson. The two are different somewhat in their habit and on slight morphological grounds. The Japanese Katsura-tree has usually several trunks diverging from the base. The Chinese plant has usually but one trunk which branches laterally several feet above the ground, the trunk sometimes remaining free of branches for nearly 50 feet. It is also a taller tree. Morphologically, it has shorter petioles and less deeply cordate leaves, the latter also somewhat hairy beneath along the veins instead of entirely glabrous as in the Japanese plant.

The Japanese Katsura-tree usually grows to a height of 30 feet but occasionally to nearly 100 feet as the tallest broad-leaved tree in their forests. The Chinese Cercidiphyllum, which occurs in abundance in some areas in western China, grows to a height of 120 feet and is the tallest and largest broad-leaved deciduous tree throughout all eastern Asia. It also attains a great age.

According to Wilson (2), who collected the tree in western China, the tree is called locally "Peh-k'o", meaning "white-fruit," the colloquial name of Ginkgo all over China, "owing doubtless to some obscure resemblance in the foliage and general appearance of the two trees." It is interesting to note that Sargent (3), observing this tree in the forests of northern Japan, notes that "in port and general appearance of its foliage Cercidiphyllum might at first sight be mistaken for a Ginkgo tree." Aside from the similar majestic appearance of venerable old trees of these two species, it is to be noted that there is a distinctive similarity between the two, the presence of short spur-branches on the shoots, a feature rarely found in other broad-leaved trees.

Fig. 16. *C. japonicum,* var. *sinense.*

Fig. 17. *C. japonicum.*

The Japanese Katsura-tree was introduced into cultivation in America in the latter part of the last century. Rehder (1) gives the year as 1865. Sargent, in 1893 (3) mentions that seeds were first sent to the Arnold Arboretum from northern Japan fifteen years ago, which makes the date around 1878. It is always one of the most impressive trees in botanical gardens whenever it is planted. It is attractive for the dense pyramidal habit with spreading branches and the handsome foliage. The leaves are purplish when unfolding, changing to bright yellow and sometimes scarlet in the fall. Its huge size does not fit it into a small garden, but on larger grounds, it often becomes a tree of great distinction.

The Chinese Cercidiphyllum was introduced into cultivation by E. H. Wilson. Rehder (1) gives the date as 1907. It was first described by Rehder and Wilson in 1913 (2), listing, among others, two October collections apparently with which seeds were procured (4). One of them is Wilson 4301, collected in 1910 from Lungan, western Szechuan, which they designated as type. The other, Wilson 742, was collected in 1907 from Fang Hsien of western Hupeh.

Both the Japanese and the Chinese trees are represented by large full grown specimens at the Morris Arboretum. The Morris Arboretum received from the Arnold Arboretum in 1912, a plant of Wilson 4301, subsequently designated as the type collection of *C. japonicum,* var. *sinense.* The tree is a pistillate one with a trunk now measuring nearly 5 feet in girth. (Fig. 15.)* The trunk is straight and it branches at about 5 feet above the ground. (Fig. 16.) A much older and larger Japanese tree, a staminate one, branches at the very base with a girth of about 12 feet. (Fig. 17.)

*Photographs in this issue by Dr. Ernst J. Schreiner

No record of this tree is extant, but judging from its age, this apparently belongs to Sargent's early introduction of over 70 years ago. Besides the difference in their branching, the foliage characters of the Chinese and the Japanese trees are very close. The Chinese tree has in general smaller, less deeply cordate leaves and with slightly shorter petioles, but the leaves are nearly entirely glabrous beneath just as in the Japanese plant.

Cercidiphyllum can be grown from seeds or by green-wood cuttings and by layering. It grows rapidly at first. In its young state, it is fastigiate in habit. When old the principal branches are spreading. They become gradually drooping and the slender tips and branchlets are often decidedly pendulous.

The wood of Cercidiphyllum is light, soft and yellow to light brown in color. Its sap and heart woods show a marked difference in the shade of the color. It is very straight grained and easily worked. It is used in China for making furniture, wood carvings and utensils. In Japan, it is often used for cases, packing boxes, and as a cheap material for interior finish of houses.

Cercidiphyllum is remarkable in that it is almost entirely free from fungus and insect diseases. Nature has apparently selected and preserved a sturdy enduring stock. Wilson notes that, in its native haunt in western China, it is very tenacious of life. He observes old, hollow stumps, broken down by wind and partially destroyed by fire, still continue to develop green leafy branches until utterly destroyed and up-rooted. Some of these old hollow stumps, showing still signs of life, measure nearly 50 feet in girth.

References

1. Rehder, A. A manual of cultivated trees and shrubs. 2nd Ed. 1940.
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3. Sargent, C.S. Notes on the forest flora of Japan, III. Gard. & Forest 6:51-52. 1893.
4. Wilson, E. H. A naturalist in western China. 2 vol. 1913.

THE DISEASES AND CARE OF BOXWOOD

A. G. Smith, Jr.
Associate Horticulturist,
Virginia Polytechnic Institute

Boxwood in its various forms is a valuable ornamental plant. Many specimens known to be more than 100 years old are found growing in Virginia.

Contrary to general belief, boxwood is a vigorous plant. In good soil it requires but little care. Its development varies with the species or variety and with the conditions under which it is grown.

No diseases of importance affect boxwood; however, numerous fungi may be found on leaves and stems after these parts have been weakened or killed by other causes. There is growing in a Blacksburg, Virginia, yard a hedge of tree boxwood and a number of good dwarf plants which were rooted from twigs thought to be diseased. The twigs had been sent to V. P. I. from various sections of Virginia for inspection.

A study of thousands of plants in Virginia shows that injury or death may be caused by one or more of the following:

I. Damage to roots by:

1. Digging or cutivating in the root area.
2. Soil washing away from roots, thus exposing them to the elements.
3. Planting too deeply.
4. Making a cone of soil or mulch around the plant, causing the water to run away from the roots.
5. Mulching too heavily, excluding air from roots.
6. Applying caustic materials or excessive amounts of fertilizer.
7. Moles and other rodents making burrows among roots.
8. Poorly drained soil.
9. Poorly prepared soil.

NOTE: This article first appeared, under the title "Boxwood," as Circular 503 of the Agricultural Extension Service, Blacksburg, Va. Because we consider it one of the most comprehensive treatments of this important subject ever to have been published, we have secured the author's permission to make it available, in slightly revised form, to our readers. We therefore desire to express our acknowledgment to the author as well as the Extension Service at Virginia Polytechnic Institute and the United States Department of Agriculture Cooperating. Ed.

II. Damage to leaves and branches by:
   1. Chemical sprays.
   2. Removing leaves by clipping to maintain formal effects instead of cutting out weak branches at top to admit light and air.
   3. Winter killing.
   4. Accumulation of soot on foliage; effect of smoke and gases.
   5. Mechanical injury from sleet and snow, bending and breaking the branches.
   6. Dead leaves accumulating inside dwarf plants.
   7. Crowding by other plants or by buildings.
   8. Sunscald and browning, resulting from weak condition of plant.
   9. Frost killing tender foliage and branches —rarely injurious to the whole plant.

III. Damage to entire plant by:
   1. Lack of water in dry seasons.
   2. Lack of reasonable supply of humus and fertilizer.

PESTS

Mites (red spiders) are rarely found on vigorous plants. They may damage boxwood as to appearance, and in severe infestation may check normal growth. Soap spray will kill mites if it strikes them. Use one ounce of mild soap to a gallon of water. Wash all soap from foliage with water the following day. Repeat if necessary. Dusting sulphur may be used to control mites, provided it is never used in the same season with oil sprays. Apply dusting sulphur when the foliage is dry and use it in early spring. Sulphur may burn foliage in hot weather.

Boxwood leaf miner is the only serious insect pest. It has been spreading for many years. Instead of destroying all infested plants, owners often refuse to do this and then depend on halfway control measures. The leaf miner may be killed by spraying all leaf surfaces (inside and outside the plant) about one week before any flies emerge with one ounce of 50 percent DDT wettable powder in three gallons of water. This treatment should be repeated within six to eight days. Since DDT kills the insects which normally eat mites (red spiders) and does not harm the mites, it is usually necessary to take special measures to control mites after applying DDT.

Psyllids (whitish sucking insects) feed on the tender new growth and cause the leaves to curl. They disfigure the plant but cause little injury. G. W. Underhill, associate entomologist, Virginia Agricultural Experiment Station, recommends spraying the plants inside and out with nicotine, about May 25, in eastern Virginia and June 10, in western Virginia. The chemical may be applied in dust form.

Nematodes may be found on boxwood roots, especially in sandy soil and in poor soils low in humus. Apply a complete fertilizer and a light mulch of manure in March. Water when necessary.

So-called wilt follows winter injury, or possibly some form of mechanical injury to the terminal twigs. The injured or girdled portion of the stem usually occurs about 6 to 8 inches from the tip on tree boxwood and about 4 to 6 inches on dwarf types. For the sake of appearances, these twigs with reddish, yellow or dead leaves may be removed.

CARE OF BOXWOOD

Most boxwood troubles are man-made. In a fairly good environment, this grand old plant can take care of itself.

Many yards have been filled with soil from the basement. The grading is often done when the soil is muddy. The soil bakes in dry weather and stays "tight" and soggy in wet weather. Boxwood does not succeed on such soil regardless of the amount of fertilizers added. The safest plan in such soil is to dig a large hole where each boxwood is to grow and fill in with good loam.

Boxwood will grow in moderate shade or in full sunlight. Morning sun in winter may cause damage by rapid thawing. It is a shallow-rooted plant and cannot survive planting too deeply or digging around roots.

It is not necessary to fertilize boxwood every year. Needs will vary widely depending on the type of boxwood used, the soil, and growing conditions. Over-fertilization may call for excessive pruning to keep the plants within bounds. A little chicken manure and a light application of bonemeal or superphosphate may be scattered around the plants in February or March, if the appearance of the plant suggests that fertilizer is needed. Never cultivate close to the plants.

Pruning boxwood is a necessary and important operation. The best time for pruning is just before growth starts in the spring. Start by removing weak and crowded branches from the top center of the plant. Where necessary, shorten the larger branches. Continue this thinning of branches over entire upper half of plant. This operation will keep plant at the desired size. In dwarf plants, remove all dead leaves that have fallen into the branches.

Never clip boxwood as you would a privet hedge. (It is regularly so clipped in Britain, Ireland, Spain and Italy for topiary work.) Endeavor to develop a stocky growth, which will hold loads of ice or snow and withstand buffeting by storms

without bending the limbs. This sturdiness can be attained only by annual thinning.

Allow light and air to reach all parts of the plant. Crowding will kill the foliage and branches.

Water all newly set plants. Water others when dry .

Boxwood may be transplanted at any time of the year except when it is making new growth. Boxwood may be sprayed with lime-sulphur or oil, when these are properly used, but unless scale infests the plants, such drastic measures had better be omitted. Bordeaux mixture is frequently sprayed on boxwood. It will do no harm, and probably will do no good.

SOME OTHER FACTORS

Boxwood may not show the effects of injury until six months or a year after the injury occurs. It may take 4 or 5 years for larger branches to die after the surface roots are cut by digging. Boxwood can compete successfully with wiregrass and other grasses and weeds, if these plants are kept mowed. Any attempt to dig these grasses out will injure the boxwood roots. Only a part of a boxwood plant may die when a part of its root system is damaged. Such dying may be seen in almost any flower border surrounded by dwarf boxwood.

Boxwood is native to East Asia, Asia Minor, including Turkey and Iran, North Africa, and Southern Europe, and also occurs to a lesser extent in the West Indies and Central America. There is no American Boxwood and none native to England.

Buxus sempervirens is the common box tree, while *Buxus sempervirens* var. *suffructicosa* is the one commonly referred to as Dwarf Boxwood or English Boxwood.

Among the thirty-odd other known species of *Buxus* are *japonica, microphylla, balearica, Fortunei, Harlandii,* and *Wallachiana.*

Variations in boxwood are endless. There are many thousands of different strains or varieties. It is probable that each of these came from an individual seed at some time in the past.

In the V. P. I. Arboretum of the Virginia Agricultural Experiment Station, Blacksburg, there are now growing more than 1,200 seedlings of tree boxwood. No two in the group are exactly alike. Some are vigorous and upright; some are dwarf in habit; others are "intermediates." Originally there were about 5,000 seedlings in this experimental planting. The weaker ones were removed over a period of years by weather and by culling.

Following the severe winter of 1935, a block containing about 1,200 three-foot tree boxwood was examined in a Virginia nursery. Half of the plants had been propagated from cuttings taken from a plant purchased in one community. The rest were propagated from a different plant growing about 35 miles from the first community. The severe weather killed all the plants from one community while those from the other were green. Although the two parent plants looked alike, they varied in their resistance to cold.

Tree boxwood normally produces seed when the manufactured food (carbohydrates) greatly exceeds the available nitrogen. Sometimes one branch may blossom and bear seed while none is produced on the remainder of the plant. While the seed are of interest in research work, they do not offer a practical means of propagating a particular type of boxwood.

Propagation—Boxwood may readily be propagated from cuttings. These will root at almost any time of the year. For outdoor rooting, place the cuttings in sand or in sandy soil from July 15 to September 15. Protect from direct sunshine and from wind. Keep the bed moist. If cutting wood is abundant, make cuttings 6 inches long for dwarf box and 10 to 12 inches for tree type. Small cuttings may be put in greenhouse or cold frames as late as November.

BOXWOOD AT THE MORRIS ARBORETUM

Although about forty named varieties and forms of boxwood are growing at the Arboretum, all but a few of them belong to a single species: *Buxus sempervirens,* the so-called Common Box, a native of southern Europe, western Asia and North Africa.

Many fine specimens of boxwood may be seen here, especially on the slopes above the Rose Garden, where are found some of the oldest and largest plants on the grounds.

Several years ago a new planting of boxwood was established near the northwest corner of the Rose Garden. Here the visitor may inspect many of the newer varieties and see for himself what a diversity of habit, leaf shape and color exists in this remarkable group of evergreen plants. (See Cover.)

While a great deal of study is needed before the classification of our boxwoods is clearly understood, it seems desirable at this time to place on record the following list of species, varieties and "forms" represented at the Morris Arboretum:

Buxus balearica
Buxus Harlandii
Buxus microphylla
" "Curly Locks"
" japonica
" "Kingsville 2A"
" "Kingsville Dwarf"
" koreana
" " aurea
" sinica
Buxus sempervirens (Anderson #350-35)
" (Anderson #351-35)
" (Anderson #352-35)
" (Anderson #789-34)
" angustifolia
" " elata
" arborescens
" aureo-maculata pendula
" aureo-variegata
" "Fairview"
" fastigiata
" glauca
" Handsworthiensis
" "Joe Gable"
" myosotifolia
" myrtifolia
" "Nish"
" nivicularis
" "Petch"
" "Prizren"
" prostrata
" pyramidalis
" pyramidalis (variegated form)
" rotundifolia
" salicifolia alata
" (spreading variety)
" suffruticosa

J. M. F., Jr.

A FLOOD OF WATERS

On Thursday night, August 18th, eastern Pennsylvania was subjected to torrential rains spawned by Hurricane Diane and the next morning the lower reaches of the Arboretum presented a scene of watery desolation. Not only had the Wissahickon Creek overflowed its banks to inundate the lowlands of Bloomfield Farm, but a vast accumulation of water from the downpour had raged across Stenton Avenue and joined the Wissahickon overflow in the lower meadow east of Northwestern Avenue. By Friday morning the waters had receded from Stenton, but on Northwestern the abandoned car of some unfortunate motorist, who had overestimated the amphibian potentialities of his vehicle, stood up to its middle in the swirling waters. (Fig. 18.)

The students and faculty of the University who have enjoyed picnicking at the new Recreation Area on Bloomfield Farm would scarcely have recognized the sight which greeted us that morning. The entire field was submerged, the watery aspect broken here by the protruding chimney of the fireplace and there by the volley-ball standards, slightly askew and looking for all the world like the masts of a sunken schooner. George Campbell would not have to worry about mowing the grass this weekend! A dozen feet higher in the old mill we found that Tom Carney had marked the place

where the flood had crested the night before. Fortunately, Jim O'Neil, wisely heeding the hurricane warnings several days earlier, had lashed the picnic tables to a tree or we would have been looking for them down in Fairmount Park!

Contrary to Hurricane Hazel, which last year leveled at least fifty trees on the Arboretum, Diane caused no permanent injury to plantings. The principal damage was suffered by the Arboretum fence. Assaulted by tons of water and debris the fence had given way in approximately ninety places, creating an impression of considerable devastation. However, thanks to Dr. Schramm's idea of fastening certain of the fence panels together with half-inch lead bolts designed to break under pressure, the actual damage was not so great as met the eye. These lead bolts had been substituted for the original iron ones in a thousand feet of fence along Northwestern Avenue and in two hundred feet along Stenton where flood damage was anticipated. Since in this storm the water rose to unforeseen levels, a few iron-bolted sections of fence fell in the path of the flood. Here the posts were bent and twisted and proved costly to repair. Where the lead bolts had been substituted, however, the fallen panels had merely to be erected and bolted to the posts which had remained standing. (Fig. 19.) This work had just been completed two weeks later, the fence upright and intact once more, when a car, skidding on a slippery roadway, crashed into another post. We were in business again!

Fig. 18. Flood waters along Northwestern Avenue.

Fig. 19. Lead-bolted sections of fence showing posts still upright.

Aside from a few sections of washed-out driveway, the remainder of the Arboretum took the rains and flood in its stride. Water coming down from Hillcrest Avenue flowed off quickly, and the high banks of the creek near the greenhouses contained the flood at that point. In fact, after a summer of heat and drought, the rejuvenation of parched lawns following the rains made us realize that destructive though the storm may have been elsewhere, at the Arboretum it was not an unmitigated catastrophe.

J. L. B.

LIBRARY ACCESSIONS

The following books have recently been added to the Morris Arboretum Library:

Plant Regulators in Agriculture, H. B. Tukey, Ed. (Wiley & Sons, 1954)

Small Fruits, Ralph E. Barker (Rinehart, 1954)

Fruit in the Garden, Norman Taylor (Van Nostrand, 1954)

The Improved Nut Trees of North America and How to Grow Them, Clarence A. Reed and John Davidson (Devin-Adair, 1954)

The Rhododendron and Camellia Year Book 1955 (Royal Horticultural Society)

Hardy Rhododendrons, Frederick Street (Van Nostrand, 1954)

Winter-Hardy Azaleas and Rhododendrons (Massachusetts Horticultural Society, 1954)

Evergreens, L. L. Kumlien (Rinehart, 1954)

**The Story of Boxwood*, Clara S. McCarty (Dietz Press, 1950)

The New Tree Experts Manual, Richard R. Fenska (de la Mare, 1954)

The Pruning Manual, Everett P. Christopher (Macmillan, 1954)

Plant Diseases, Ernst Gram and Anna Weber (London, 1952)

Beautiful Flowering Shrubs, Trees and Heather, G. Clarke Nuttall (London, 1953)

***Important Trees of the Ryukyu Islands*, Egbert H. Walker (U.S. National Museum, 1954)

Trees and Shrubs in Eastern North America, Benj. Blackburn (Oxford University Press, 1952)

****Travels of William Bartram*, Mark Van Doren, Ed. (Dover Publications, Inc.)

Winter Key to Woody Plants, Arthur H. Graves (Pub. by the author)

Directory of American Horticulture for 1954 (The American Horticultural Council, Inc.)

American Rose Annual 1955, Fred J. Nisbet, Ed. (American Rose Society)

* Gift of J. Churchill Newcomb
** Gift of the author
*** Gift of Dover Publications, Inc.

NEW ASSOCIATES

The Arboretum has been happy to welcome the following new Associates:

Miss Margaret G. Butler
Mrs. Van Horn Ely, Jr.
Mr. Edward W. Evans
Mr. C. Jared Ingersoll
Mrs. Sidney Keith
Mr. Howard S. Levy
Mr. and Mrs. Francis Macdonald
Dr. I. S. Ravdin
Mr. Nicholas G. Roosevelt
Mrs. Elizabeth R. Vallier
Mr. J. M. Van Nieukerken
Mr. John W. Woerner

Arboretum Activities

(Continued from Page 26)

optimum growth. The rich resources of the Arboretum as an outdoor laboratory were thus utilized to the fullest extent.

The remainder of the course was devoted to the Angiosperms, or Flowering Plants, and here the students had an opportunity to study over 200 important genera belonging to 60 different plant families. The emphasis at all times was upon acquiring a familiarity with the *method* by which plants may be identified rather than an insistence upon memorizing all of the several hundred species encountered.

Special attention was, of course, focused on such important ornamental genera as *Magnolia, Philadelphus, Spiraea, Prunus, Malus, Acer, Ilex, Euonymus, Hedera, Cornus, Rhododendron* (including *Azalea), Fraxinus, Syringa, Forsythia, Lonicera, Viburnum*, etc., and emphasis was laid on the characteristics and potentialities of a large number of "special purpose" plants.

Special instruction was given in methods of propagation of woody plants and the students learned how to make grafts and stem cuttings. Several members of the group were interested in

the preparation and use of herbarium specimens and the facilities were provided for them to acquire these techniques.

The success of this course, given in ideal surroundings for this type of instruction, indicates the desirability of offering it and perhaps other courses in future years.

Recreation Area

The recreation area, the establishment of which was mentioned in these Notes in the April issue, was formally inaugurated on May 2, when the Houston Hall Student Board held its annual spring outing on the grounds.

During the ensuing spring and summer months more than a score of organizations held picnics in the area. These included, in addition to a number of fraternities and campus clubs, such groups as the Senior Class of the Medical School, the American Society of Engineers, the Institute for Humanistic Studies, the faculties of the Moore School of Electrical Engineering, the School of Education, the Botany Department, the Statistics Department, and groups from LaSalle College and the Budd Company. Several other groups have scheduled outings to be held during the autumn.

Organizations desiring to use the recreation area should consult the office of the Dean of Men, 117 Logan Hall.

J. M. F., Jr.